

DOCUMENT RESUME

ED 362 956

EA 025 318

AUTHOR Bellinger, Mark; And Others
 TITLE Making Room on the Tray: Fruits and Vegetables in the National School Lunch Program.
 INSTITUTION Public Voice for Food and Health Policy, Washington, DC.
 PUB DATE Sep 93
 NOTE 43p.
 AVAILABLE FROM Public Voice for Food and Health Policy, 1001 Connecticut Avenue, N.W., Suite 522, Washington, DC 20036.
 PUB TYPE Reports - Research/Technical (143)
 EDRS PRICE MF01/PC02 Plus Postage.
 DESCRIPTORS *Child Health; Elementary Education; Food; *Food Service; *Food Standards; Health; *Lunch Programs; *Nutrition; School District Spending
 IDENTIFIERS Fruits; *School Lunch Program; Vegetables

ABSTRACT

This document presents findings of the latest annual report on school lunches conducted by Public Voice for Food Health Policy. The study examines access to fresh fruits and vegetables in the National School Lunch Program (NSLP) in terms of nutrition, distribution, and food safety. Data were obtained through telephone surveys of 200 school districts with 4,000 or more students and a questionnaire mailed to the 50 state commodity distribution directors. Forty-nine distribution directors responded. Major conclusions are that children are not consuming nearly enough fruits and vegetables on a daily basis and that the NSLP makes an inadequate contribution to fruit and vegetable consumption among children. In addition, the USDA commodity program has been unable to meet the logistical requirements for distribution to schools. Finally, school food-service personnel expressed interest in procuring nonchemically grown produce. Specific recommendations are made under the following areas: (1) increase the number of servings of fruits and vegetables required in the NSLP Meal Pattern from two to three servings; (2) improve the nutritional quality of fruits and vegetables supplied to the NSLP; (3) overhaul the distribution of fresh produce to the NSLP through the commodity program (a responsibility of USDA); and (4) within 5 years, make sure that 25 percent of all foods provided by USDA to the NSLP are grown with low levels of pesticides. Sixteen tables and three charts are included. (LMI)

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Making Room on the Tray

Fruits and Vegetables in the National School Lunch Program

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Public Voice for Food and Health Policy
September 1993

ACKNOWLEDGEMENTS

Public Voice would like to thank a variety of people for assistance with this report. Special thanks go to Susan Krebs-Smith from the National Cancer Institute; Zoe Slagle, President, American Commodity Distribution Association; Vernon Morgan and his staff at USDA's Food Distribution Division; Darrell Breed of USDA's Agricultural Marketing Service; Joe Weingart of USDA's Food and Nutrition Service - Mid Atlantic Region; and Chuck Cowan. Thanks also go to Allen Rosenfeld for his comments and support.

Public Voice for Food and Health Policy

Public Voice for Food and Health Policy is a national, nonprofit research, education and advocacy organization that promotes a safer, healthier and more affordable food supply. Public Voice advances the interest of all Americans by fostering food and agriculture policies and practices that enhance public health and protect the environment.

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TABLE OF CONTENTS

Executive Summary	2
Introduction	6
Nutrition -- Ensuring Children Get the Fruits and Vegetables They Need for a Healthy Start	8
Distribution -- Bringing Fresh Fruits and Vegetables into Schools through the USDA Commodity Program	22
Food Safety -- Reducing Children's Exposure to Pesticides in Fruits and Vegetables	30
Methods	37
Endnotes	38

EXECUTIVE SUMMARY

Overview

For the past five years, Public Voice for Food and Health Policy has analyzed and worked to improve the nutritional quality of the National School Lunch Program (NSLP). In this study, the latest of our annual school lunch reports, we examine access to fresh fruits and vegetables in the NSLP in terms of three interrelated areas: nutrition, distribution and food safety. In the first section, we examine the amount and variety of fruits and vegetables that schools are serving and children are eating. In the second section, we evaluate the distribution of fresh produce to schools through the USDA commodity program. In the third section, we explore the need and potential for the NSLP to offer children produce grown with fewer chemical pesticides.

In 1946, Congress established the NSLP through the National School Lunch Act as an entitlement program. Today, the NSLP is the largest child nutrition program, and is available to 90 percent of all school age children. The NSLP provides an average of 24.5 million lunches each day, with over half the lunches served to low-income children.

Although improvements are necessary in order for the program to fulfill its potential, the NSLP is ideally suited to help children develop good eating habits and lead healthy lives. A key component of this program should be increasing the amount of fruits and vegetables children eat. Numerous studies indicate that today's children do not meet the federal government's Dietary Guideline recommendations for fruit and vegetable consumption. For example, less than one in ten children meet the recommended minimum of five servings of fruits and vegetables per day. Just over one-half of children eat less than one serving of fruit a day and one in five eat less than one serving of vegetables a day. One in three lunches which children select includes only one of the two servings of fruits or vegetables required by the NSLP Meal Pattern.

For more than 50 years, USDA has purchased and distributed agricultural commodities to the school lunch program. These products, such as flour, cheese and butter, comprise approximately 20 percent of the foods in school lunches. A very limited amount and variety of fresh fruits and vegetables are distributed to the NSLP through the USDA commodity program. While over 80 percent of school food service officials surveyed by Public Voice would like USDA to provide an increased amount of produce to schools, nearly three-quarters of state commodity distributing agents said that improvements in current facilities and operations are necessary before they can handle an increased volume of fresh produce.

School food service personnel also expressed an interest in offering children food grown with little or no agrichemicals. Sharing public concern over the health and environmental effects posed by pesticides, many are looking for options that are as safe as possible for children. Nearly 90 percent of school food service directors who are not already purchasing fresh produce grown organically or with low levels of pesticides, or who are uncertain about the way in which their produce is grown, say they are interested in buying these foods. Almost 90 percent said they would like to receive this type of produce through the USDA commodity program.

Major Conclusions

- ▶ Recent data indicates that children are not consuming nearly enough fruits and vegetables on a daily basis.
- ▶ The NSLP makes an inadequate contribution to fruit and vegetable consumption among children.
- ▶ School food service directors and state distribution agents want to receive more fresh produce through the USDA commodity program.
- ▶ The USDA commodity program does not provide enough fresh fruits and vegetables and has been unable to meet the logistical requirements of the schools in the distribution of fresh fruits and vegetables.
- ▶ The nation's schools want greater access to fresh fruits and vegetables grown either organically or with low levels of pesticides.
- ▶ The NSLP offers a unique opportunity to address public concerns about agrichemical use and expand markets for foods grown with little or no pesticides.

Recommendations

The number of servings of fruits and vegetables required in the NSLP Meal Pattern must be increased from two to three servings (for a total of 1-1/8 cups) per lunch.

To ensure that a change in the number of fruit and vegetable servings required in the Meal Pattern will effectively lead to an increase in overall fruit and vegetable consumption among children, the following actions need to be taken:

- ▶ Nutrition education for children should accompany any changes in the NSLP.
- ▶ Schools should supply children with a much greater variety of fruits and vegetables.
- ▶ School food service personnel should receive education and training on food purchasing and preparation that increases the volume of fruits and vegetables consumed, reduces the fat content of meals and makes healthy foods more appealing to children.
- ▶ The authorization for the National Food Service Management Institute (NFSMI) should be extended and expanded through Fiscal Year 1998.
- ▶ Increased federal aid should be authorized and appropriated to the NSLP to offset the cost of adding an additional required serving of fruits and vegetables.

In order for USDA to improve the nutritional quality of fruits and vegetables that are supplied to the NSLP, the following changes need to be made in the USDA commodity distribution program:

- ▶ USDA fruit and vegetable commodities that are processed with added fat or sodium exceeding federal standardized definitions for low fat and low sodium should be phased out and replaced with alternatives.
- ▶ USDA criteria for selecting fruits and vegetables provided to the NSLP must be based primarily on nutritional considerations.

USDA should begin an immediate overhaul of distribution of fresh fruit and vegetables to the NSLP through the commodity program.

- ▶ FNS and the Agricultural Marketing Service should work together in purchasing more nutritious commodities that will meet the demand and needs of school food service directors and the children that they feed.
- ▶ USDA should help schools increase the amount of fresh produce in lunches.
- ▶ Cash in lieu of commodities should be expanded and made available to all schools.

USDA should immediately take steps to increase the amount of **fruits and vegetables** served in the NSLP that have been verified as grown organically, grown with low levels of synthetic pesticides, or containing ultra-low levels of synthetic pesticide residues.

- ▶ Technical assistance and grower and distributor contacts should be provided to local school districts by USDA to promote access and availability to these fruits and vegetables.
- ▶ USDA should provide some of these fruits and vegetables to the NSLP through the commodity distribution program.

Within five years, 25 percent of all foods provided by USDA to the NSLP should consist of a mix of food grown with low levels of pesticides and organic and low-residue foods.

INTRODUCTION

Almost 50 years ago, the National School Lunch Program (NSLP) was established to "safeguard the health and well-being of the nation's children." Today, the NSLP feeds over 24 million children every day in more than 92,000 schools. Providing a balanced meal for children across the country, the NSLP is particularly valuable to low-income children, who rely on school meals for much of their daily food and nutrient intake. Because the NSLP serves 4.1 billion lunches per year, the extensive reach of this program provides the perfect opportunity to make a widespread public health impact on our nation's children.

Since eating habits and attitudes toward food are formed early in life, the NSLP can serve as the model for healthy food choices by helping school children establish good dietary habits early in their lives. Although this program functions as a critical deterrent to hunger for many children, the meals provided are often not as healthful and nutritious as they could be.

Building upon the strengths of the NSLP, Public Voice for Food and Health Policy has analyzed and worked to improve the nutritional quality of the program over the past five years. In 1989, Public Voice's "What's For Lunch?" found that school lunches are high in fat and low-fat options were unavailable. "Heading for a Health Crisis" in 1991 expanded these findings by documenting the high consumption of fat, saturated fat, cholesterol and sodium among children on a daily basis. And last year in its 1992 report, "Agriculture First," Public Voice documented the pervasiveness of high-fat commodities provided by USDA to school lunches through the commodity distribution system.

In "Making Room on the Tray," Public Voice continues to explore options for improving the nutritional quality of the NSLP. In this report, we examine access to fresh fruits and vegetables in the NSLP in terms of three interrelated areas: nutrition, distribution, and food safety. In the first section, we examine the amount and variety of fruits and vegetables that schools are serving and children are eating. In the

second section, we evaluate the distribution of fresh produce to schools through the USDA commodity program. In the third section, we explore the need and potential for the NSLP to offer children produce grown with fewer pesticides.

The issues examined in this report could not be more timely. Health professionals nationwide are promoting increased fruit and vegetable consumption through high profile educational campaigns such as "5 A Day." The commodity distribution program is up for reauthorization on Capitol Hill next year. The release of recent studies about the effects of pesticides on children has drawn increased public attention to the safety of our food supply, and has secured a pledge from the Clinton administration to better protect our children from pesticides.

The report sheds light on the inadequacy of our children's consumption of fruits and vegetables and offers ways that the NSLP can remedy this deficiency. With the public expressing more interest about health and environmental issues than ever before, this report also addresses the demand and concerns of local school food service officials for safer food for the children they feed. We hope that the findings and recommendations included in this report will serve to help make a good program even better and improve the health and well-being of our children.

NUTRITION

Ensuring Children Get the Fruits and Vegetables They Need for a Healthy Start

In 1946, Congress established the NSLP through the National School Lunch Act as an entitlement program. Today, the NSLP is the largest child nutrition program, and is available to 90 percent of all school age children. The NSLP provides an average of 24.5 million lunches each day, with over half the lunches served to low-income children.¹ While the NSLP can only begin to provide children with the foods and nutrients that they may not receive at home, it can and should serve as a model for addressing hunger and nutritional deficiencies. Although improvements are necessary for the program to fulfill its potential, the NSLP is ideally suited to help children develop good eating habits and lead healthy lives. And the best place to start is by providing more fruits and vegetables.

Children are Not Eating Enough Fruits and Vegetables

Fruits and Vegetables -- Critical for Children

Over the past decade, research has continuously pointed to the relationship between a nutritious diet and good health. Fruits and vegetables play an important role in providing a variety of nutrients that promote growth. They are excellent sources of vitamins, dietary fiber and potassium, and most are low in fat, calories, sodium and cholesterol. Health experts agree that a diet with plenty of fruits and vegetables can help reduce the risk of cancer and heart disease.²

The importance of fruits and vegetables in our diet is underscored by both the 1990 Dietary Guidelines and the Food Guide Pyramid. The guidelines encourage Americans to eat a diet low in fat, saturated fat and cholesterol, and to consume at least five servings of fruits and vegetables a day. Specifically, the recommendations suggest that Americans consume three or more servings of vegetables and two or more servings of fruits each day (See Table 1).³ The Food Guide Pyramid suggests that five to nine servings of fruits and vegetables should be consumed daily.⁴

Table 1: Dietary Guidelines for Americans

- ▶ Eat a variety of foods.
- ▶ Maintain a healthy weight.
- ▶ Choose a diet low in fat, saturated fat, and cholesterol
 - Total fat should account for 30 percent or less of calories; saturated fats should account for less than 10 percent of calories.
- ▶ Choose a diet with plenty of vegetables, fruits and grain products.
 - Vegetables - 3 or more servings
 - Have dark-green leafy and deep-yellow vegetables often;
 - Eat dry beans and peas often;
 - Eat starchy vegetables, such as potatoes and corn
 - Fruits - 2 or more servings
 - Have citrus fruits or juices, melons, or berries regularly;
 - Choose fruits as desserts and fruit juices as beverages;
- ▶ Use sugar only in moderation
- ▶ Use salt and sodium only in moderation
- ▶ If you drink alcoholic beverages, do so in moderation

Source: Dietary Guidelines for Americans, 1990

What children are eating

Current research shows that most children are not meeting the recommendations outlined in the Dietary Guidelines and the Food Guide Pyramid. Many studies show that children are not eating enough fruits and vegetables.

Fat, Saturated Fat and Sodium

Children are getting too much fat and sodium and not enough fiber in their diets. Public Voice's 1991 school lunch report, "Heading for a Health Crisis," found that children consume 36.4 percent of their calories from fat, and 14.1 percent from saturated fats.⁵ This exceeds the Dietary Guidelines recommendations by 21 percent and 41 percent, respectively. Consumption of sodium is also too high. Children's average daily sodium intake is 2,861 mg. This is 59 percent higher than recommended sodium intakes.

Fiber

Other studies show that the fiber intake of school children is much lower than desired levels. The Bogalusa Heart Study at Tulane University has found that fiber consumption among children remained virtually unchanged between 1976 and 1988, averaging 12 grams per day. This is half of the National Cancer Institute's recommendation of 20 to 30 grams of fiber daily. This study also found that children with higher fiber intake have lower intakes of total fat, saturated fat and cholesterol.⁶

Fruits and Vegetables

Children are not eating the recommended amounts of fruits and vegetables. This fact is supported by two separate analyses of the Continuing Survey of Food Intake by Individuals (CSFII): an evaluation of the 1989 survey by the National Cancer Institute (NCI) and a study of the 1989 and 1990 surveys by USDA's Human Nutrition Information Service (HNIS).

NCI's Results

Examining new data from USDA's 1989 CSFII, NCI found a disturbing absence of fruits and vegetables in our children's diets. Based on intakes over a three-day period, NCI's study shows that an overwhelming majority of children do not consume the recommended daily servings of fruits and vegetables (See Table 2 and Chart 1).⁷

Among 6 to 11 year olds,

- ▶ Less than one in ten (9%) children meet the recommended minimum of 5 servings of fruits and vegetables per day;
- ▶ Over one-half (57%) consume less than one serving of fruit per day;

- ▶ One in five (20%) consume less than one serving of vegetables per day;
- ▶ Only 17 percent meet the recommended minimum of two servings of fruits per day;
- ▶ Only 14 percent meet the recommended three servings of vegetables.

Among 12 to 19 year olds,

- ▶ Only 11 percent of teenage females meet the recommended 5 servings per day. While males did better, only 24 percent met the suggested 5 servings of fruits and vegetables per day;
- ▶ Nearly three-quarters (73% of males, 72% of females) eat less than one serving of fruit per day;
- ▶ 16 percent of females consume less than one serving of vegetables versus nine percent of males;
- ▶ About one in ten (8% of males, 11% of females) meet the recommended minimum two servings of fruits per day;
- ▶ Nearly one in three males (32%) and roughly one in five females (19%) meet more than three servings of vegetables a day.

**Table 2: Percentage of Children Consuming
Fruits and Vegetables (CSFII 1989)**

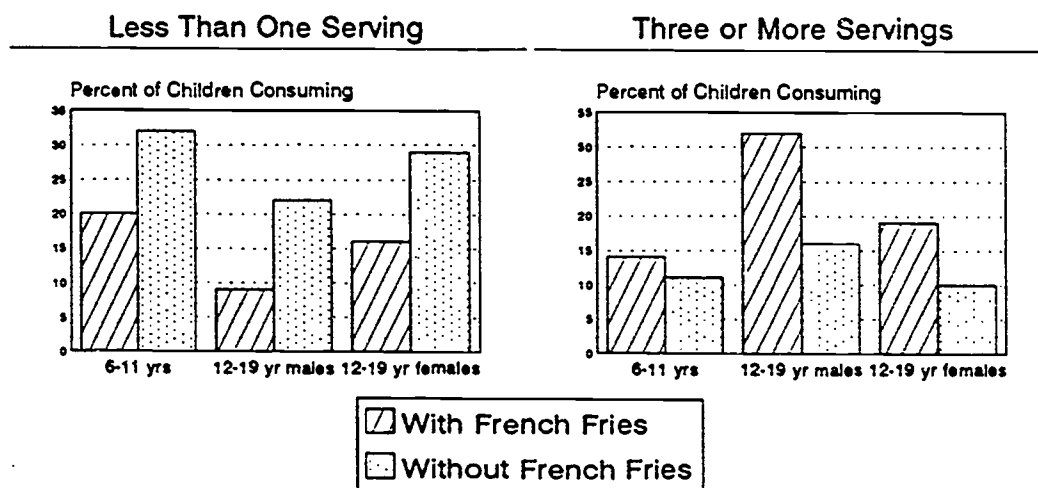
	6-11 yrs (%)	12-19 yrs Male (%)	12-19 yrs Female (%)
Fruits and Vegetables			
5 or more servings	9	24	11
Fruits Only			
2 or more servings	17	8	11
Less than 1 serving	57	73	72
Vegetables Only			
3 or more servings			
French Fries Included	14	32	19
French Fries Excluded	11	16	10
Less than 1 serving			
French Fries Included	20	9	16
French Fries Excluded	32	22	29

Source: Speech by Susan Krebs-Smith, National Cancer Institute,
July 19, 1993, at the Public Health Conference on Records and Statistics

The figures depicting children's daily vegetable intake become increasingly worse when french fries and other potato products are not counted as part of vegetable consumption (See Table 2 and Chart 1). When french fries are excluded from vegetable consumption tabulations:

- ▶ The percentage of 6 to 11 year olds eating less than one serving of vegetables a day increases from 20 percent to 32 percent;
- ▶ The percentage of 12 to 19 year olds eating less than one serving of vegetables per day increases by more than 144 percent for males and increases by 81 percent for females;
- ▶ The percentage of 12 to 19 year olds consuming more than the recommended three servings per day is cut in half for both males and females.

Chart 1: Percentage of Children Consuming Vegetables, Including and Excluding French Fries (CSFII 1989)



Source: Susan Krebs-Smith, NCI

HNIS's Results

In a separate analysis of the 1989 and 1990 CSFII, HNIS used intake information from a single day versus the three days studied by NCI. Among elementary school children, 35 percent ate no fruit on the day of the survey. Among teenagers, almost 60 percent ate no fruits on the day of the survey. About 25 percent of school age children sometimes eat no vegetables. For elementary school boys and teenagers, potatoes comprised almost half of the vegetables eaten. Of the potatoes consumed, many were french fries, potato chips and hash browns. About half of the potatoes eaten by teens and elementary school children were fried.⁸

What's for Lunch -- the NSLP's Contribution to Children's Fruit and Vegetable Consumption

What Schools are Offering

NSLP's School Lunch Meal Pattern Requirements

In order for schools to receive federal government subsidies for the NSLP, they must serve lunches that follow the School Lunch Meal Pattern. The meal pattern specifies the number of servings of meat or meat alternates, bread or bread alternates, vegetables and/or fruits, and milk. A total of five meal components must be served in each meal. Schools may adjust the minimum serving size based on the age of the children, but they are not required to do so.

As part of the meal pattern, children must be offered two or more servings of vegetables and/or fruits. No more than one-half of the total fruit and vegetable requirement may be met with a fruit or vegetable juice.⁹

Limited Fruit and Vegetable Options

The meal pattern does not indicate what types of fruits and vegetables should be served. Unfortunately, a study commissioned by USDA's Food and Nutrition Service (FNS) identified a striking lack of variety of fruits and vegetables served with each meal. With so few choices, children are less likely to find and choose the fruits and vegetables they like and need.

Over one-third (39%) of all schools surveyed in the FNS study offer only one choice of fruit or none at all. When just elementary schools are considered, the percent of schools offering only one choice or no fruit at all rises to almost half (46%), versus about one-fourth (26%) of secondary and middle schools. About two-thirds (61%) of all schools offer two or more choices of fruit (See Table 3).

In addition to the poor assortment of fruit choices, the selection of vegetables provided in school lunches is also limited. Nearly two-thirds (64%) of all schools offer only one or two choices of vegetables. When only elementary schools are

considered, nearly three-quarters (72%) offer between one and two choices versus about half (46%) of the middle schools. Slightly more than one-third (37%) of all schools offer three or more choices.

**Table 3: Number of Options Available within
Meal Pattern Categories in Lunches Offered
National School Lunch Program (School Year 89/90)**

	Percent of Meals Offered		
	Elementary ¹	Middle ¹	All
FRUIT			
None Offered	7	6	6
1 Option	39	20	33
2 Options	25	17	23
3 Options	15	23	18
4 or more Options	14	33	20
VEGETABLE			
1 Option	39	21	33
2 Options	33	25	31
3 Options	14	25	18
4 or more Options	5	14	8
Combination Items Only ²	9	14	11

¹ Elementary, n=198; Middle, n=99; All, n=297

² No separate vegetable options were offered. All vegetable options were offered as part of a combination entree item such as chef salad, pasta with tomato sauce, tacos, etc.

Source: USDA/FNS, Child Nutrition Program Operations Study, 2nd Year

Furthermore, the school lunches are not making dark-green leafy and deep-yellow vegetables available. According to the Dietary Guidelines, these vegetables should be consumed often, as they are an important source of beta carotene. Unfortunately, the FNS study found that no more than 13 percent of the lunches offered these vegetables (See Table 4).

**Table 4: Percent of Lunches Offering Vegetables
National School Lunch Program (School Year 89/90)**

	Elementary	Middle
All Vegetables	91	86
Raw Vegetables	49	67
Lettuce, Salad	36	58
Other Raw Vegetables	13	13
Cole Slaw, Miscellaneous salads	5	8
Cooked Vegetables	45	39
Corn	17	13
Green Beans	10	8
Broccoli*	6	7
Cabbage	1	2
Peas*	5	2
Carrots*	1	2
Mixed Vegetables*	13	10
Onion Rings	1	2
Spinach Greens*	2	0
Misc. vegetables	3	3
Potatoes	43	61
French Fries, Tater Tots, Etc.	35	54
Other	9	15

* Signifies dark-green or deep-yellow vegetable

Source: USDA/FNS, Child Nutrition Program

Operations Study, 2nd Year

What Children are Choosing

The NSLP's Offer Versus Serve (OVS) option allows children to refuse two of the five meal components required in the meal pattern, yet still allows these meals to be reimbursable by the NSLP. The OVS option is mandatory in middle and secondary schools and optional in elementary schools. According to the FNS study, many children are not selecting all five components.

In schools offering the OVS option, nearly one-third of elementary school lunches that children selected and nearly one-half of middle school lunches have less than five meal components. Six percent of elementary school lunches and ten percent of middle school lunches consist of only three components. One-fourth of elementary school lunches and one-third of middle school lunches include four of the five meal components (See Table 5).

**Table 5: Percent of Selected Lunches Containing
3, 4, or 5 or more Meal Pattern Components,
National School Lunch Program (School Year 89/90)¹**

Number of Meal Components	Percent of Lunches		
	Elementary ²	Middle ²	All ²
3 Components	6	10	7
4 Components	26	35	29
5 or more Components	67	55	63

¹ Includes only subsample of elementary schools that had the OVS option

² Elementary, n=7,906; Middle, n=5,127; All, n=13,033

Source: USDA/FNS, Child Nutrition Program Operations Study, 2d Year

The FNS study also looked at the components not selected and found that children are not taking the second fruit and vegetable component in their lunches. Among all schools, meat and meat alternates, bread and bread alternates and milk are part of 91 percent or more of the selected lunches. However, nearly one in three lunches (32%) does not include both servings of fruit or vegetable as required in the NSLP Meal Pattern. Over one-fourth (26%) of elementary school lunches and nearly two-fifths (39%) of middle school lunches do not include two servings of fruits and vegetables (See Table 6).

**Table 6: Percent of Selected Lunches Including
Specified Meal Pattern Component
National School Lunch Program (SY89/90)¹**

Meal Component Category	Percent of Lunches		
	Elementary ²	Middle ²	All ²
Fruit and Vegetable ³			
1 F&V item	26	39	32
2 or more F&V item	70	56	65
Bread/Bread Alternate ³	96	96	96
Meat/Meat Alternate	99	99	99
Milk	95	84	91

¹ Includes only subsample of elementary schools that had the OVS option

² Elementary, n=7,906; Middle, n=5,127; All, n=13,033

³ Includes separate and combination items.

Source: USDA/FNS, Child Nutrition Program Operations Study, 2nd Year

Plate Waste

Of particular significance in understanding what is finally consumed by children is plate waste. Plate waste is the portion of the selected lunch that is not consumed. The FNS study found that elementary school children waste 23 percent of their selected meals versus about nine percent of middle and secondary school children.¹⁰ Clearly, this indicates that many children do not care for what is being served.

A Helping Hand? USDA's Commodity Program

Over 50 years ago, the commodity distribution program was developed to stabilize farm prices and support farm incomes through surplus removal. Under Section 32 of the Agricultural Adjustment Act of 1935, Congress made funds available for the purchase and distribution of surplus farm commodities such as butter, cheese, flour, fruits and vegetables to local school districts. These commodities have served as an important source of support for school lunch programs -- amounting to approximately 20 percent of total food purchases.

Two types of commodity support are provided to the NSLP. They are: "entitlement" commodity support which provides a specific value of commodities (about \$.14 per meal) to school lunch programs for each lunch served, and "bonus" commodity support of foods offered when USDA needs to reduce excess commodity holdings or alleviate a specified unexpected agricultural surplus.

USDA estimates the amount of commodities each state is eligible to receive based on the number of lunches served in the previous school year. The agency then notifies states of the value of their commodity entitlement. USDA purchases and delivers the commodities to either state or commercial warehouses during the school year. After receiving the commodities, the states are responsible for distributing the commodities to local school districts.¹¹

Nutritional Quality

The vast majority of foods supplied to schools through the commodity program are canned or frozen and have a relatively long shelf life. A very limited amount of fresh fruits and vegetables is also distributed.

Over the past five years, vegetables have represented anywhere from 10 percent to 19 percent of all commodities. Of these, potatoes have represented anywhere from 26 percent to 75 percent (See Table 7).¹²

Table 7: Summary of USDA Potato Commodities to the NSLP, 1988-1992

Year	Percent of All Potatoes			Potatoes as Percent of All Vegetables	Vegetables as Percent of All Commodities	Total Volume of Potatoes (pounds)
	Deep Fry	Oven Fry	Rounds			
1988	5%	46%	50%	39%	13%	70,294,500
1989	6%	56%	38%	75%	10%	94,920,600
1990	5%	61%	34%	46%	12%	59,399,310
1991	4%	37%	59%	26%	16%	48,396,480
1992	5%	43%	52%	30%	19%	64,293,000

Source: USDA/FDD, Compiled by Public Voice

Unfortunately, the USDA potato products are almost always processed, and contain high levels of fat and sodium. One of the most popular items, oven fry french fries, exceeds the recommended maximum percent of calories from fat. And, while the sodium levels are low, they reflect the sodium content prior to any food service personnel or children adding their own salt. Other potato products supplied are also nutritionally poor. Comprising more than half of all the potato products provided in 1992, potato rounds exceed the maximum calories from fat by over 40 percent. The sodium content of one 3/4 cup serving represents nearly 90 percent of the recommended maximum salt intake for an entire meal. An additional potato product made available in 1992 was deep fry french fries, which derive nearly one-half of all their calories from fat (See Table 8).

Table 8: Nutritional Profile of USDA Potato Commodities¹

	Calories	Percent of Calories from Fat	Sodium
Fresh	165	1.1%	12
French fries, oven-fry	186	34.8%	27
Rounds	210	42.4%	693
Dehydrated ²	180	43.5%	522
French fries, deep-fry	135	47.3%	92

¹ Based on One 3/4 Cup Serving

² Based on USDA Commodity recipe

Source: USDA

While fresh potatoes have no fat, cholesterol or sodium, they have been offered to schools only once since 1979. If USDA provided fresh potatoes to the NSLP, this healthy commodity could be served in several tasty, nutritious ways. Fresh potatoes could be baked and offered at a potato bar with several low and reduced fat toppings such as light sour cream, yogurt or vegetables. New red potatoes could be boiled and mashed potatoes could be prepared with skim milk.

The Future of Our Children

As indicated in the findings, children are not getting enough fruits and vegetables through the NSLP, or consuming them at home. Unfortunately, many local school districts and USDA are not providing enough of a variety or low-fat fruit and vegetable options.

To fulfill its original mandate of safeguarding the health and well-being of the nation's children, the NSLP must provide not only a balanced meal but must also help close the nutritional gaps in children's diets. While the NSLP can only be a part of a child's diet, it can serve as a model from which our children can develop healthy eating patterns and build a strong future.

Major Conclusions

- ▶ **Children are not consuming enough fruits and vegetables on a daily basis.**

The most recent data available shows a tremendous deficiency in the consumption of fruits and vegetables among children. The vast majority of children are consuming less than one serving of fruit a day and not coming close to eating the recommended five servings a day of fruits and vegetables. Clearly, with such shortcomings, change is needed if we want to start putting our children's diets on track.

- ▶ **The NSLP makes an inadequate contribution to fruit and vegetable consumption among children.**

Children do not receive the necessary options and variety from school lunches. Most lunches offer only one or two choices of fruits and vegetables and some lunches do not even have one fruit option. Also, the availability of vegetables rich in beta carotene is very limited.

Additionally, it is clear that children are not making the best choices. As many as one-third of lunches do not include all five meal components, with the second serving of fruits and vegetables most likely to be the item left out. Even if the lunch served contains all five meal components, much of it goes to waste -- especially among elementary students. Plate waste suggests that more varied options need to be offered in the NSLP.

Since studies indicate that many children are falling far short of the recommended intake of fruits and vegetables, school lunches offer a critical opportunity to fill in the nutritional gaps in children's diets -- particularly those of low income children. Unfortunately, since children are eating less than the two servings offered under the meal plan's requirements, the NSLP is not filling the gap.

Recommendations

The number of servings of fruits and vegetables required in the NSLP Meal Pattern must be increased from two to three servings (for a total of 1-1/8 cups) per lunch.

Increasing the amount of fruits and vegetables in the Meal Pattern to 3 servings will promote public health and also help meet the federal government's Healthy People 2000 goal of increasing daily fruits and vegetable intake to at least five servings a day.¹³ These changes will make our children healthier in the short run and teach children important dietary habits that will follow them for the rest of their lives.

To ensure that a change in the number of fruit and vegetable servings required in the Meal Pattern will effectively lead to an increase in overall fruit and vegetable consumption among children, the following actions need to be taken:

- ▶ **Nutrition education for children should accompany any changes in the NSLP.** By providing classroom instruction in addition to any changes in the lunch room, children can be made aware of the importance of good diet in both theory and practice.
- ▶ **Schools should supply children with a greater variety of fruits and vegetables.** Offering more variety would help schools comply with the Dietary Guidelines, provide children with essential nutrients and expose them to an assortment of nutritious foods. When purchasing and preparing food, school food service personnel should also take into consideration the fruits and vegetables that students prefer and request on a regular basis. More options and a greater variety would increase the likelihood that children will eat a greater amount of fruits and vegetables.
- ▶ **School food service personnel should receive education and training on food purchasing and preparation that increases the volume of fruits and vegetables consumed, reduces the fat content of meals, and makes healthy foods more appealing to children.** In doing so, school food service personnel should take into consideration ethnic and cultural diversity when planning menus. Local chefs and other food professionals can and should be engaged in helping food service personnel on how to prepare and serve fruits and vegetables in healthy, tasty ways.
- ▶ **The authorization for the National Food Service Management Institute (NFSMI) should be extended and expanded through Fiscal Year 98.** The NFSMI was authorized in the Child Nutrition Act of 1989 to conduct and report research, provide training and technical assistance, and assist schools in providing high quality, nutritious, cost-effective meal service to children. The NFSMI can serve as an ideal vehicle to coordinate and train school food service personnel in implementing Dietary Guidelines and the recommended changes in the Meal Pattern.
- ▶ **Increased federal aid should be authorized and appropriated to the NSLP to offset the cost of an additional required serving of fruits and vegetables.**

In order for USDA to improve the nutritional quality of fruits and vegetables that are supplied to the NSLP, the following changes need to be made in the USDA commodity distribution program:

- ▶ **USDA fruit and vegetable commodities that are processed with added fat or sodium exceeding federal standardized definitions for low fat and low sodium should be phased out and replaced with alternatives.** Fresh potatoes

and other low-fat options should be made available to children. Also, schools should limit their local purchases and preparation of items with added fat or sodium above low fat and low sodium levels.

- ▶ **USDA criteria for selecting fruits and vegetables provided to the NSLP must be based primarily on nutritional considerations.** Current selections are predominantly based on objectives related to surplus removal and price stabilization rather than the nutritional value. A healthier, greater variety of fruits and vegetables that meet the Dietary Guidelines should be offered through the USDA commodity program.

DISTRIBUTION

Bringing Fresh Fruits and Vegetables into Schools through the USDA Commodity Program

For more than 50 years, USDA has purchased and distributed agricultural commodities to the school lunch program. The vast majority of foods supplied to schools through the commodity program are canned or frozen and have a relatively long shelf life. However, a very limited amount and variety of fresh fruits and vegetables are distributed to the NSLP through the USDA commodity program.

Fresh apples and pears have been provided to schools almost exclusively, while other fresh fruits and vegetables have been offered periodically as bonus commodities. However, storage and delivery problems have raised doubts among state commodity agents about the efficiency and suitability of the USDA commodity program as a purveyor of fresh produce.

USDA Needs to Improve Its Commodity Distribution Program

Fresh produce -- a trivial part of USDA commodities

USDA provides little fresh produce to the schools. Money spent on fresh produce has amounted to no more than three percent of spending for all fruits and vegetables and less than one percent of spending for all commodities in the last five years (See Table 9).

**Table 9: Summary of USDA Commodity Expenditures
to the National School Lunch Program
Fresh Fruits and Vegetables, 1988-1992**

Year	Amount (\$)	Percent of All Commodities	Percent of Fruit and Vegetable Commodities Only
1988	2,661,575	0.32%	2.28%
1989	3,627,099	0.44%	3.00%
1990	4,105,904	0.66%	3.14%
1991	3,075,399	0.49%	2.10%
1992	3,145,258	0.47%	2.53%

Source: USDA/FDD. Compiled by Public Voice.

Further, the variety of fresh produce is quite limited. Apples and pears make up the vast majority of fresh fruits and vegetables that are supplied to schools. The only other fresh produce that was provided to the NSLP between School Years 1982 to 1992 were potatoes in 1986.¹⁴

Commodity Directors Tell Public Voice: We Want More

During the summer of 1993, Public Voice conducted a survey of state commodity agents who are responsible for managing the receipt and distribution of USDA commodities. The survey asked the agents for their assessment of the distribution of fresh produce to the NSLP through the USDA commodity program. (Survey methods and samples are described in Appendix).

Of the 49 states and the District of Columbia whose agents responded to the survey, 41 receive fresh produce through the USDA commodity program (See Table 10). Of these 41 states,

- ▶ Three-fourths (76%) of the agents expressed a desire to receive either the same volume of fresh produce as part of their entitlement commodities or more.
- ▶ Over four-fifths (85%) expressed a desire to receive either the same volume of fresh produce as bonus commodities or more.

Table 10: State Commodity Director's Desire for Fresh Produce as an Entitlement and Bonus Commodity

Q: Would you like your state's <u>entitlement</u> commodities to include more, about the same, or less fresh produce?	
More	17%
About the same	59%
Less	22%
Don't Know	2%
Q: Would you like your state's <u>bonus</u> commodities to include more, about the same, or less fresh produce?	
More	51%
About the same	34%
Less	10%
Don't Know	5%

Source: Public Voice survey

School Food Service Directors Want More -- and a Greater Variety

Public Voice also surveyed 200 school food service directors who account for 71 percent of all NSLP food expenditures in 1991. (Survey methods and samples are described in Appendix). Results from this survey indicate that local school districts want to receive more fresh fruits and vegetables through the commodity program. Over four-fifths (84%) of the school districts want USDA to provide more fresh produce to them through the commodity system (See Table 11).

Table 11: Desire for More USDA Fresh Produce

Q. Would your school district like to receive more, less, or about the same volume of fresh produce through the USDA commodity program?	
More	84%
About the same	10%
Less	5%

Source: Public Voice Survey

Public Voice's survey of school food service directors also found that schools want more variety from USDA as well. An overwhelming majority (93%) of directors would welcome a more varied selection of fresh produce through the USDA commodity program. However, many food service directors qualified their response, indicating they want more variety only if the produce is in good, useable condition (See Table 12).

Table 12: Desire For Greater Variety of Produce

Q. Would your school district like to receive a greater variety of fresh produce through the USDA commodity program?

Yes	93%
No	5%
Unsure	2%

Source: Public Voice Survey

More Fresh Produce Means More Problems

Public Voice's survey of commodity agents found many problems associated with distributing fresh produce to local school districts. Of the 41 states that receive fresh produce through the USDA commodity program, over four-fifths of the state commodity directors identified transportation, storage and short shelf life as the factors that had the greatest influence on their ability to distribute fresh produce as a USDA commodity (See Table 13).

Table 13: Important Factors in Supplying Fresh Produce

Q: What factors have the greatest influence on your ability to supply school districts with fresh produce through the commodity program? (Mark all that apply)

Transportation and/or storage problems	82%
Short shelf life	90%
Poor quality	34%
Fresh produce not available on a regular basis	24%
Schools are not interested enough in getting more fresh produce through the commodity program	22%
Other	26%

Source: Public Voice Survey

Out of the nine states that no longer receive fresh produce from USDA through the commodity program:

- ▶ One state, Kansas, is no longer a recipient of any USDA commodities; it receives a cash reimbursement instead.
- ▶ Five of the state agents feel that the logistical difficulties of fresh produce are too great and opt out of receiving fresh fruits and vegetables through the commodity program.
- ▶ The remaining three state directors claim that fresh produce received through USDA is unacceptable.

The agents from states who do not receive fresh produce from USDA stressed the many difficulties associated with funneling fresh fruits and vegetables into the NSLP through the commodity system. Among the problems stated were relatively large shipments that cannot be used before spoilage, inadequate storage space and transportation, and poorly timed deliveries by USDA.

Changes Need To Be Made In the Distribution of Fresh Produce

In order to respond to the state commodity agents' and school food service directors' interest in receiving more fresh produce through the USDA commodity program, USDA must make several changes in the way food is distributed. Public Voice's survey of state commodity directors indicates that agents in 30 of the 41 states (73%) receiving fresh produce through USDA feel improvements in current facilities and operations are necessary before they can handle an increased volume of fresh produce from USDA.

Significant and substantial improvements need to be made in the way USDA delivers these products, the manner in which the states receive and distribute them, and the capacity of local schools to handle more produce. Without such changes, increasing the volume of fresh produce delivered will only aggravate current problems. According to state commodity directors, necessary changes include:

- ▶ Expansion of current storage capacity and establishment of different types of storage facilities are needed to handle the additional volume of fresh produce. Fresh produce requires different storage conditions (such as temperature) than more durable goods. The need for more space and special storage arrangements would likely affect not only the states and any contracted warehouses or distributors, but the individual schools as well.
- ▶ More frequent deliveries would be necessary to maintain the freshness of the fruits and vegetables and to provide schools with useable volumes of produce. While local wholesalers can deliver produce to school districts frequently and on specific dates, USDA makes only periodic deliveries each year, often with little prior notification.

- ▶ Supplemental and improved means of transportation will be necessary to deliver additional produce more frequently. Many delivery trucks have only two temperatures: one for dry goods, and one for frozen products. A specific section in the trucks, or separate trucks altogether, are necessary to deliver fresh produce.

Major Conclusions

- ▶ School food service directors and state distribution agents want to receive more fresh produce through the USDA commodity program.

The vast majority of state commodity agents express a desire to receive either the same volume or more fresh produce as part of their entitlement commodities. At the same time, these directors cite numerous problems with distribution and storage that would have to be resolved before an increase in volume could occur.

Also, most school food service directors want USDA to provide more fresh produce through the commodity system. At the same time, many school food service directors are concerned about the quality of fresh produce supplied to them from USDA. They want more fresh produce, but only if it is in satisfactory condition upon its arrival to their local districts.

- ▶ The USDA commodity program does not provide enough fresh fruits and vegetables and has been unable to meet the logistical requirements of the schools in the distribution of fresh fruits and vegetables.

The performance of the USDA commodity program in supplying fresh produce to the NSLP has been lackluster. Fresh produce comprises a small percentage of the total fruits and vegetables provided, although it often has less sodium and added fat than canned or processed items.

Additionally, there are many problems associated with the distribution and storage of fruits and vegetables supplied to the NSLP by the USDA commodity program. The difficulties incurred by the states and local districts in receiving fresh produce through USDA are substantial. These difficulties will be magnified if the volume is increased without major changes in the distribution, storage and frequency of deliveries.

Recommendations

USDA should begin an immediate overhaul of distribution of fresh fruits and vegetables to the NSLP through the commodity program. USDA criteria for procuring and distributing fruits and vegetables to the NSLP should be dramatically changed. USDA must place primary emphasis on meeting children's nutritional needs and the school districts' logistical requirements, rather than concentrate primarily on farm income support and surplus removal.

- ▶ **FNS and USDA's Agricultural Marketing Service should work together in purchasing more nutritious commodities that will meet the demand and needs of school food service directors and the children they feed.** For example, USDA should provide schools with produce that does not meet top grading standards for size, shape, color or surface blemishes, but is otherwise wholesome food. These fruits and vegetables do not meet grading standards often because less pesticides are used to grow them. Because this produce gets destroyed, donated, or processed, it would be inexpensive for USDA to purchase.
- ▶ **USDA should help schools increase the amount of fresh produce in lunches.** However, USDA should take a careful look at the best way in which to provide fresh produce to schools. The agency should not rule out the possibility of eliminating the distribution of fresh produce through the commodity program altogether. USDA could then reallocate its resources to assist schools in purchasing fresh produce and purchase more durable goods for the NSLP.
- ▶ **Cash in lieu of commodities should be expanded and made available to all schools.** Cash in lieu of commodities provides local school districts with cash in amounts equal to the value of commodities they would receive under the regular USDA commodity distribution program. This program enables school districts to choose between USDA commodities and local purchases. Thus, schools will be able to select the product best suited to their needs.

FOOD SAFETY

Reducing Children's Exposure to Pesticides in Fruits and Vegetables

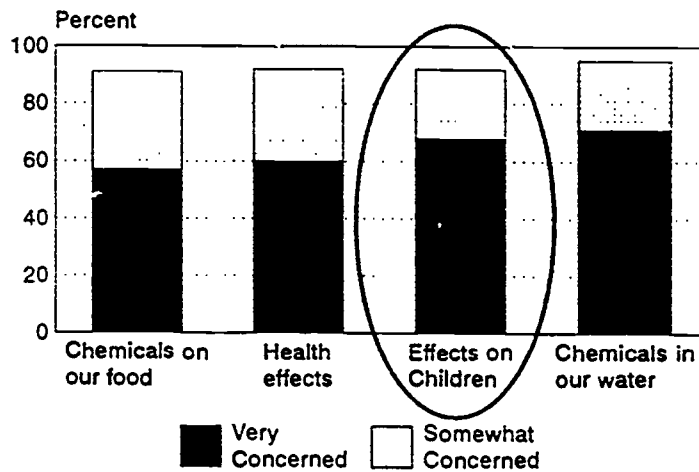
As Americans become increasingly concerned about the effects of pesticides on our children and our environment, many are looking for changes in the way our food is produced. Yet while recent studies indicate that pesticide standards do not adequately protect children, health experts insist that children eat more fruits and vegetables -- foods which often contain pesticide residues. Thus, Americans are often faced with an unappetizing tradeoff between nutritional benefits of fruits and vegetables for children, and the health risks linked to pesticides.

School Lunches Should Offer Low Pesticides Fruits and Vegetables

The American Public Wants Changes

In March 1993, Public Voice commissioned a national opinion survey on public attitudes about agrichemical use. Public Voice's study, "What Americans Think About Agrichemicals," showed strong concern about the effects of pesticides on our children and the environment. When asked about a variety of health risks, respondents cited the risk of pesticides and fertilizers in the water supply and the effect on young children as their top two concerns. Ninety-two percent of Americans were very concerned or somewhat concerned about the health effects on young children from chemicals used to grow food and 95 percent of Americans were concerned about pesticides or fertilizers in the water supply (See Chart 2).¹⁵

Chart 2: Concern among Americans about the effects of agrichemicals on health and the environment



Source: Public Voice, *What Americans Think About Agrichemicals*

Such strong concern not only represents a desire for change, but the demand for the development of a new market for reduced pesticide choices as well. Nine out of ten Americans (85%) said they would be very likely or somewhat likely to buy foods grown with fewer chemicals. But less than one-quarter of Americans (24%) feel that the current selection of such foods is adequate. Nearly three-quarters (71%) would like to see more low-chemical or no chemical foods in stores (See Table 14).

Table 14: Americans' Attitudes About the Foods Grown with Less Chemicals

Q. Suppose a well-known retailer was thinking of offering a new line of bread which used wheat grown with fifty percent less chemicals, and was labeled as such. Would you be very likely to buy such a product, somewhat likely, or not at all likely?

Very likely	50%
Somewhat likely	35%
Not at all likely	11%
Don't know	4%

Q. Some people say that it is difficult to find foods grown with few or no chemicals in your typical food store. Would you like to see these stores stock more low chemical foods, or do you think the current selection is adequate?

Stock more low-chemical foods	71%
Current selection is adequate	24%
Don't know/Refused	6%

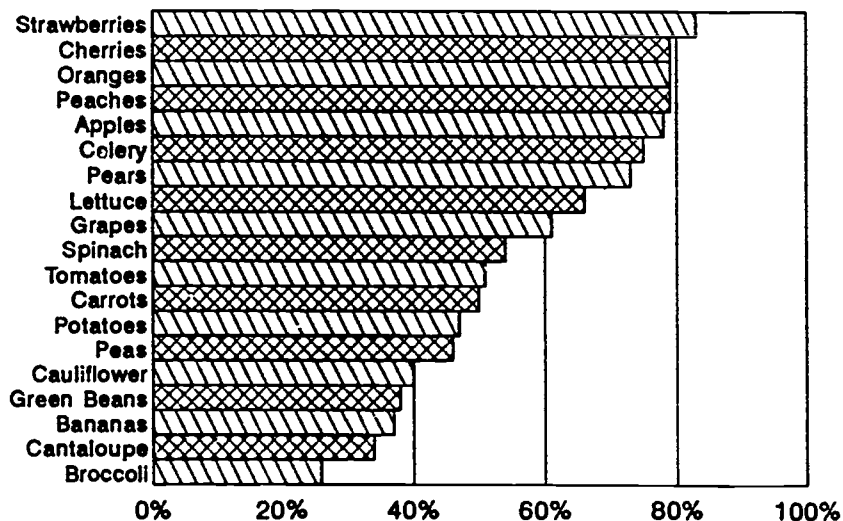
Source: "What Americans Think About Agrichemicals," Public Voice

Recent Reports Show Cause for Concern

An ever growing body of evidence points to the hazards posed by pesticides on our children, our environment and ourselves. Many studies point to the pervasiveness of pesticides and other agrichemicals in our environment. A 1990 EPA examination of the nation's 94,000 community water system wells found that 52 percent contained nitrates and 10 percent contained pesticide residues.¹⁶ USDA has estimated that 46 percent of all U.S. counties contain groundwater susceptible to contamination from agricultural pesticides and fertilizers.¹⁷ A 1989 U.S. Geological Survey detected pesticides in 90 percent of the streams they tested in 10 Midwestern states.¹⁸

Pesticides are pervasive in our food supply as well. In 1991, the Food and Drug Administration (FDA) found that 51 percent of fruit and 32 percent of vegetable samples analyzed contained pesticide residues.¹⁹ The Environmental Working Group's 1993 report, "Pesticides in Children's Food," found that pesticide residues were detected in over half of the samples for peaches, strawberries, oranges, apples, cherries, raspberries, blackberries, pears and cantaloupes. Between 35 and 50 percent of the samples of tomatoes, green beans, bananas, carrots, potatoes, and grapes had detectable pesticide residues (See Chart 3).²⁰

Chart 3: Percent of Fruit and Vegetables Heavily Consumed by Young Children with Pesticides Detected



Source: Environmental Working Group, *Pesticides in Children's Food*

The long-awaited study by the National Academy of Sciences, "Pesticides in the Diets of Infants and Children," noted that children can be more susceptible to the damaging effects of pesticides, and that current federal standards do not adequately protect children.²¹ As children eat more of particular foods than adults (e.g. apple juice), their exposure to certain pesticides differs from adults. Unfortunately, the federal government's determination of so-called safe levels are based on the probable exposure to adults.

The NAS report noted that federal pesticide residue "tolerances"²² do not account for the fundamental differences between adults and children. Still developing children's bodies differ physiologically from those of adults. As they grow, certain nutrients are more valuable to them, and certain toxins are more damaging. Even if pesticide residues on our food are below current tolerances, they may be still pose a risk to our children's health.

The NAS report findings are but the latest piece of evidence indicating that the health and environmental costs from widespread agrichemical use need to be reduced. The Environmental Working Group report found that the average child has been exposed to up to 35 percent of his or her entire lifetime dosage of some cancer-causing pesticides by the age of five. In addition, infants and children are exposed to combinations of two to three pesticides per food. By the age of one, the average child has been exposed to more risk of cancer from pesticides than the EPA says he should get over a lifetime. The study found that out of 19 frequently consumed fruits and vegetables listed, at least some of each sample had a detectable residue, and 12 out of the 19 foods had a detectable residue in 50 percent or more of their samples.²²

Looking for a Choice -- School Food Service Officials

With the high level of public concern and interest in food with fewer pesticides, it is not surprising that school commodity agents and school food service directors would also like to have the option of selecting food with fewer pesticides. In a recent survey, Public Voice found that there is strong desire among professionals involved with the school lunch program to offer children produce grown organically or with low levels of pesticides.

Among 200 school food service directors,

- ▶ 92 percent are already purchasing or are interested in purchasing foods grown either organically or with low levels of pesticides;
- ▶ Of those who are not purchasing such foods or are uncertain about they way in which their produce is grown, almost 90 percent are either very interested or somewhat interested in buying such foods;

²² The maximum legally allowable level of pesticide residues on a food crop.

- ▶ When asked about whether USDA should provide produce grown either organically or with low levels of pesticides, almost 90 percent expressed an interest in receiving such produce through the USDA commodity program (See Table 15).

Table 15: Local School Foodservice Directors' Desire For Fresh Produce Grown Organically Or With Low Levels of Pesticides

Q. Do you currently purchase fresh produce for your district that is grown organically or with low levels of pesticides?	
Yes	24%
No	46%
Unsure	30%
 Q.. If "No" or "Unsure," how interested are you in purchasing fresh produce grown organically or with low levels of pesticides?	
Very interested	36%
Somewhat interested	53%
Not interested at all	7%
Unsure	5%
 Q. Would you like to receive fresh produce that is grown organically or with low levels of pesticides through the USDA commodity program?	
Yes	89%
No	6%
Unsure	6%

Source: Public Voice Survey

Of the school districts that want USDA to supply fresh produce that has been grown either organically or with low levels of pesticides, nearly 60 percent are willing to spend 10 percent more of their entitlement dollars to receive such produce.

Table 16: Local School Foodservice Directors's Willingness to Pay More For Produce Grown Organically Or With Low Levels of Pesticides

Q. For the schools that would like to receive fresh produce that is grown organically or with low levels of pesticides through the USDA commodity program, would you be willing to pay 10 percent more (through entitlement dollars)?	
Yes	60%
No	24%
Unsure	17%

Source: Public Voice Survey

More Options Need to be Offered

Despite the increased attention and concern about the chemicals used on our food, there has been little progress in meeting the challenge posed by this nationwide demand for food produced with little or no chemicals. With the Clinton Administration's unprecedented announcement of its commitment to promoting pesticide use reduction, there is a better opportunity to substantially reduce the risks from chemicals in our food supply than ever before. Swift federal action to promote major reductions in agrichemical use and develop a larger market for no chemical or low chemical produce is needed to restore public confidence and to ensure that foods eaten by children are as safe as possible.

Supporting schools in the purchase of fruits and vegetables grown organically or with low levels of pesticides would be a significant and appropriate step toward addressing the concerns of the American public. Creating a market for organic and reduced-pesticide foods will complement needed legislative reform and help implement the Clinton Administration's new policy of reducing pesticide use.

Major Conclusions

- ▶ **The nation's schools want greater access to fresh fruits and vegetables grown either organically or with low levels of pesticides.**

The vast majority of school food service directors are interested in purchasing foods grown either organically or with low levels of pesticides. This demand is consistent with Public Voice's national opinion survey which found that Americans want greater access to these foods as a way to address their concerns about health effects of pesticides on young children.

- ▶ **The NSLP offers a unique opportunity to address public concerns about agrichemical use and expand markets for foods grown with little or no pesticides.**

Last year, the NSLP served over 4 billion school lunches to more than 24 million children daily in over 92,600 elementary and secondary schools. The extensive reach of this program provides the perfect opportunity to expand the market for such produce.

Recommendations

USDA should immediately take steps to increase the amount of fruits and vegetables served in the NSLP that have been verified as grown organically, grown with low levels of synthetic pesticides, or containing ultra-low levels of synthetic pesticide residues.

The impact of such a program would be two-fold. First, if either USDA or schools begin to purchase organic or low-chemical produce, great strides will be made towards addressing the National Academy of Sciences' concerns about pesticides and children.

Second, the volume of school and USDA purchases would serve as an excellent device to expand the market for foods grown organically or with low levels of chemicals. Last year, USDA alone spent almost \$125 million on fruits and vegetables for the NSLP. Total school lunch purchases of fruits and vegetables are likely to greatly exceed to commodity program purchases. With such a large potential market, there are tremendous possibilities for producers, processors and distributors. In addition, as market demand increases for such produce, the incentive for farmers to reduce chemical use is increased.

- ▶ **Technical assistance and grower and distributor contacts should be provided to local school districts by USDA to promote access and availability to these fruits and vegetables.** School food service directors should be educated about fruits and vegetables grown with little or no pesticides and provide information about benefits, availability and access to such produce. Such a program would assist schools in purchasing competitively-priced, low chemical or no chemical fruits and vegetables.
- ▶ **USDA should provide some of these fruits and vegetables to the NSLP through the commodity distribution program.** With the Clinton administration's dedication to pesticide reduction, USDA should take the lead in supplying such produce to schools through the commodity system.

Within five years, 25 percent of all foods provided by USDA to the NSLP should consist of a mix of food grown with low levels of pesticides and organic and low-residue foods. Since the government buys hundreds of millions of dollars worth of food each year for the NSLP, some of the buying power should be used to encourage farmers who want to reduce or eliminate pesticide use.

Methods

School District Food Service Director Survey

The 1992-1993 *School Foodservice Who's Who Directory* (Information Central) provided 2,292 school district names, contacts and phone numbers used for this survey. Information about the school districts was obtained from the Department of Education. Only school districts with 4,000 or more students were included in the listing. These school districts are responsible for 71 percent of the estimated \$3.19 billion spent by local school districts on school food in 1991.

The listing was separated into two mutually-exclusive pools. The first included 490 school districts with \$1 million or more in food purchases each and the second included 1,802 schools with less than \$1 million in food purchases each.

One hundred surveys were completed for each sampling pool. For all analyses, weighted figures are reported. The weighting factors for the first group was 4.9, or 490/100, and 18.02, or 1802/100, for the second group.

The survey was conducted by phone between June 1, 1993, and June 9, 1993. The contact person listed in the *Who's Who Directory* was requested. If not available, the current food service director or person involved with purchasing of food for the district was requested. In most cases, the contact listed was available. After a brief introduction, the survey was initiated; the entire survey lasted from two to three minutes.

Of the phone calls made: 20 school districts could not be reached because of no answers or busy signals during at least five attempts; five school districts had directors that were unavailable; and eight school districts refused to be surveyed.

State Commodity Directors Survey

A questionnaire was also mailed to each state commodity distribution director. Names and addresses were obtained from the USDA's Food and Nutrition Service. The surveys were mailed on June 14, 1993. Follow-up letters were mailed on June 28.

Directors from 49 of 50 states and from the District of Columbia responded to the survey. Survey responses from the state commodity directors were compared to the survey responses from the school district directors. Inconsistencies were noted and follow-up phone calls were made to the state commodity directors and school district directors as necessary. For example, in a few instances, the school district contact responded that they received no fresh produce when in fact they did.

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